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It was as true of trees as of the clover plant. Roots elevated found the cavities below partially filled, and could not thus permit of the tree being quite as low as before. Dr. Lapham thought that in the West large old trees blew over much more readily than younger ones, though the comparative weight of head and roots were proportionally the same, chiefly because the older trees had been drawn nearer the surface.

Mr. M. also remarked that the belief was very prevalent among woodmen, that the numerous large roots which marked the surface of an old piece of woodland "like railroads on a modern map" were not originally near the top, but had grown to the surface. He had always supposed these also to result from thickening, but he now had seen some cases in which this would not account for it, and only the frost-lifting power would. So, also, in many swampy pieces of land, much of the vegetation had the appearance of tussocks, and the land as if it had been washed away from around the roots. It was not probably from annual growths, but from gradual liftings of the plants from year to year and the filling in of the spaces beneath by the soft mud.

It was likely that one of the chief offices of the tap roots was to guard the tree from this frost lifting as much as possible. His impression was that the trees of tropical climates had not near the development of tap roots which are found in the more northern ones, but this was a matter for further investigation.

MARCH 17.

The President, Dr. RUSCHENBERGER, in the chair.

Twenty members present.

The death of Dr. Wm. S. Halsey was announced.

MARCH 24.

The President, Dr. RUSCHENBERGER, in the chair.

Twenty-seven members present.

On Actinophrys sol.—Prof. LEIDY, after describing the structure and habits of this curious rhizopod, said that he had recently observed it in a condition which he had not seen described. He had accidentally found two individuals including between them a finely granular rayless sphere nearly as large as the animals themselves. These measured, independently of the rays, 0.064 mm. in diameter; the included sphere 0.06 mm. He supposed that he had been so fortunate as to find two individuals of *Actinophrys* in conjunction with the production of an ovum.

Preserving the animals for observation, on returning after an absence of three hours, the animals were observed connected by a broad isthmus including the granular sphere reduced to half its original diameter. Two hours later the granular sphere had melted in the isthmus, leaving behind what appeared to be a large oil globule and half a dozen smaller ones. The isthmus in the former time measured $\frac{1}{25}$ mm., at the later time $\frac{1}{38}$ mm.

Shortly afterwards, the isthmus elongated and contracted to $\frac{1}{50}$ mm. on the left, while the right half, retaining the oil globules, remained as thick as before. At the same time the animals became flattened at the opposite poles. The latter subsequently became depressed so that the animals assumed a reniform outline.

The isthmus now more rapidly narrowed and elongated, became a mere thread, and finally separated about one hour from the last two hours indicated.

The oil globules were retained in the right-hand individual, which, with the remaining projection of the isthmus, appeared broadly codiform in outline. In the left-hand individual all remains of the isthmus at once disappeared, and the animal appeared reniform in outline, but now contracting on the same side it assumed the biscuit form. The constriction rapidly increased, and in thirty minutes from the time of separation from the right-hand individual it divided into two separate animals presenting the ordinary appearance of *A. sol.* Thus this second division took place in an opposite direction from the first.

The right-hand individual, retaining the oil globules apparently unchanged, more slowly assumed the reniform outline, and then became constricted all around. The constriction elongated to an isthmus, in the centre of which were the oil globules. Three hours after the separation of the right-hand animal, the isthmus was narrowed to about half the diameter of the two new individuals which were about to be formed. At this moment other engagements obliged me to leave the examination of the animals. Six hours after, in the animalcule cage, I observed only half a dozen individuals of the *A. sol.*

MARCH 31.

The President, Dr. RUSCHENBERGER, in the chair.

Sixteen members present.

The following papers were presented for publication:—

“On Variations in Structure of Horns of Deer of the Genus *Cariacus.*” By E. D. Cope, A.M.

“On the *Ziphius* of Nantucket.” By E. D. Cope, A.M.

On report of the committees, the following papers were ordered to be published:—